

Head Coaching Intentions of NCAA Division I Assistant Women's Volleyball Coaches

Erin K. Lindsey

A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Arts in the Department of Exercise and Sport Science (Sport Administration).

Chapel Hill
2011

Barbara Osborne, J.D. (Advisor)

Dr. Ed Shields (Committee)

Dr. Elizabeth Hedgpeth (Committee)

© 2011
Erin K. Lindsey
ALL RIGHTS RESERVED

Abstract

ERIN K. LINDSEY: Head Coaching Intentions of NCAA Division I Assistant Women's
Volleyball Coaches
(Under the direction of Barbara Osborne, J.D.)

Since the passing of Title IX, the percentage of female head coaches coaching women's teams has declined from 90% to 42.6% (Acosta & Carpenter, 2010). Women have eleven times more opportunity to play NCAA volleyball than men, yet males still occupy the majority of head coaching positions at the highest levels. The purpose of this study was to compare the head coaching intentions of NCAA Division I assistant volleyball coaches based on gender and to determine what variables significantly explained these intentions. This study confirmed previous findings (Sagas et al., 2000; Cunningham et al., 2003) that male coaches had significantly higher self-efficacy and head coaching intentions than females. A multiple linear regression resulted in a significant model including variables explaining 12.9% of the variance in head coaching intentions. A female only model explained 16.6% of the variance including variables: self-efficacy, level of volleyball played and level of mentoring.

Table of Contents

LIST OF TABLES	v
LIST OF FIGURES	vi
Chapters	
I. INTRODUCTION	1
Statement of Purpose	3
Research Questions/Null Hypothesis.....	3
Definition of Terms.....	5
Assumptions.....	6
Limitations	6
Delimitations.....	7
Significance of Study	7
II. REVIEW OF LITERATURE.....	9
Explaining the Decline.....	12
Homologous Reproduction	13
Occupational Closure.....	16
Psychological (Individual) Explanations	16
Sex Role Socialization	17

Work Experiences	19
Self-Efficacy and Head Coaching Intentions.....	20
Theory of Planned Behavior	23
Solutions: Professional Development and Mentoring	24
Mentoring.....	25
Measuring Mentor-Protégé Relationships: Mentor Function Questionnaire.....	29
Conclusion	30
III. METHODOLOGY	32
Instrumentation	32
Coaching Self –Efficacy	33
Mentoring Functions Questionnaire	33
Head Coaching Intentions.....	34
Subjects	34
Survey Distribution and Collection Procedures.....	35
Data Analysis	35
IV. RESULTS	36
Description of the Sample.....	37
Descriptive Statistics & Comparative Analysis	37
Demographic Data	37
Comparative Analysis of Demographic Data	38
Level of Education	39
Income.....	39
Experiential Data	40

Comparative analysis of experiential data	41
Level of Volleyball Played	42
Level of Mentoring Experienced	42
Psychological Data.....	42
Coaching Self-Efficacy	42
Head Coaching Intentions.....	43
Factors explaining Head Coaching Intentions	43
Factor Analysis by Gender.....	45
V. DISCUSSION	47
Summary	47
Head Coaching Intentions.....	48
Self-efficacy	49
Explaining Head Coaching Intentions	49
Explanatory Variables by Gender.....	51
Male Subjects.....	51
Female Subjects	52
Limitations	53
Implications.....	54
Future Research	56
Recommendations.....	57
APPENDICIES	59
Appendix A: Survey	59
Appendix B: Invitation E-mail.....	66

REFERENCES 68

LIST OF TABLES

Table 1: Descriptive Statistics of Demographic Data of Complete Sample	37
Table 2: Descriptive Statistics of Demographics by Gender	38
Table 3: Descriptive Statistics of Experiential Data of Complete Sample	40
Table 4: Descriptive Statistics of Experiential Data by Gender	41
Table 5: Descriptive Statistics of Psychological Data by Gender	43
Table 6: Explanatory Factors of the Variance in Head Coaching Intentions	44
Table 7: Explanatory Factors of the Variance in Head Coaching Intentions for Female Subjects.....	46

LIST OF FIGURES

Figure 1: Level of Education (Female vs. Male Subjects).....	39
Figure 2: Income (Female vs. Male Subjects)	40

I. INTRODUCTION

Since 1972, when Title IX of the Education Amendments Act was passed, the number of female coaches head coaching women's intercollegiate athletic teams has dropped from over 90% to just 42.6% today (Acosta & Carpenter, 2010). This shift was not dramatic and immediate, but slow and continues through the present. Women's volleyball is offered by 96.8% of NCAA intercollegiate athletic programs, second behind women's basketball (Acosta & Carpenter, 2010). Unlike women's basketball, the male equivalent (men's NCAA volleyball) is far fewer in numbers and significantly lower profile. This means the most lucrative jobs in college volleyball are on the women's side, with the average head coaching position in the Big 10, Big 12 and Pac 10 conference paying over \$115,000 annually (AVCA, 2008). Females dominate participation numbers with 11 times more women playing collegiate volleyball than men leading one to think that there would be a much larger population of potential female assistant coaches and therefore female head coaches. Although there is still a majority of female assistant coaches in Division I women's volleyball (54%), the number that are becoming head coaches continues to decrease (Acosta & Carpenter, 2010; US Department of Education, 2010).

The decline of female head coaches in Division I women's volleyball mirrors the overall numbers dropping from 86.6% of female head coaches in 1977 to 55.7% today (Acosta & Carpenter, 2010). The Equity in Athletic Data Cutting Tool reports the

majority has shifted with 154 male coaches and 141 female coaches in Division I (US Department of Education, 2010). The evidence of the declining trend is apparent when comparing the 2003 EADA numbers reporting 127 male head coaches and 162 female head coaches in Division I women's volleyball. In Division I women's basketball, female head coaches are a significant majority with 213 females and 114 males (US Department of Education, 2010). One could attribute this difference to the fact that there are many more lucrative opportunities to coach men's basketball and therefore create more opportunities for females to coach women's basketball, where in volleyball there are significantly fewer schools offering men's volleyball. Due to the revenue generation potential of men's basketball and football, NCAA Division I institutions choose to put their funding resources back into these programs as opposed to non-revenue generating male sports like volleyball. Due to Title IX legislation requiring equal opportunity and resources provided to female athletes, women's volleyball is often fully funded with 12 scholarships and at least 2 if not 3 full time coaches. In the United States, a head coaching position for a women's volleyball team at a Division I University is arguably the most lucrative job in volleyball with the average salary in the most competitive conferences reaching far above six figures (AVCA, 2008). These higher salaries have created significantly more competition for these jobs and higher expectations for success.

Researchers have explored a myriad of different reasons for the decline of female coaches including career related burnout (Pastore, 1991), retention factors (Inglis, Danylchuk & Pastore, 1996) and discriminatory hiring (Lovett & Lowrey, 1994). Some have suggested that fewer females are applying for head coaching positions (Sagas, Cunningham, & Ashley, 2000) and that women leave the coaching profession at a faster

rate than their male counterparts (Knoppers, 1992; Hart, Hasbrook, & Mathes, 1986; Sagas et al., 2000).

Based on the Cunningham et al., (2003) finding that female assistant coaches of women's teams have less desire than their male counterparts to pursue head coaching, this study will explore variables that could explain an assistant coach's desire to pursue head coaching. With this information, organizations and athletic departments could more accurately predict which assistant coaches would be more likely to pursue head coaching, allowing development of recruitment and retaining strategies of female head coaches in volleyball.

Statement of Purpose

The purpose of this study is to examine NCAA Division I women's volleyball assistant coaches' intentions to become head volleyball coaches, including what experiential and psychological factors may or may not explain these intentions. Specifically this study will measure the subjects' head coaching intentions and look to identify significant variables that explain these intentions. In addition, it will examine if there are significant differences in the intention level and the significant explanatory variables based on gender.

Research Questions/Null Hypothesis

1. Are the head coaching intentions of Division I assistant women's volleyball coaches significantly different based on gender?

Ho: The head coaching intentions of Division I assistant women's volleyball coaches are not significantly different based on gender.

2. Do the following variables significantly explain the variance in head coaching intentions?

- Level of coaching self-efficacy
- Level of mentoring experienced
- Level of playing experience
- Level of education completed
- Number of years coaching
- Number of children under the age of 25
- Household size
- Current assistant coaching total income (Salary, camps, etc.)
- Number of professional/career development opportunities throughout coaching career

Ho: The following variables do not significantly explain the variance in head coaching intentions.

- Level of coaching self-efficacy
- Level of mentoring experienced
- Level of playing experience
- Level of education completed
- Number of years coaching
- Number of children under the age of 25
- Household size
- Current assistant coaching total income (salary, camps, etc)

- Number of professional/career development opportunities throughout coaching career
3. Are the variables that significantly explain variance in head coaching intention different based on gender?
- Ho: The variables that significantly explain variance in head coaching intention are not different based on gender.

Definition of Terms

- NCAA: The National Collegiate Athletic Association (NCAA) is a voluntary organization through which the nation's colleges and universities govern their athletics programs.
- Division I: The subdivision of the NCAA consisting of 335 active members with 320 members offering women's volleyball (NCAA.org, 2010.)
- Assistant coach: a full time employee of a Division I institution with the title of assistant volleyball coach.
- Head coaching intentions: the desire of the subject to pursue a head coaching position in their career.
- Head Coaching Self-efficacy: Self-efficacy defined by Bandura (1986) is "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). Head coaching self-efficacy for the purposes of this study will be the assistant coach's judgment of their capabilities to organize and execute courses of action required to be a head volleyball coach.

- Level of playing experience: the level of volleyball competition the subject has personally experienced (e.g. High School, Junior College, College DI, College DII, and International Professional League).
- Level of education completed: the highest degree awarded to the subject (e.g. High School/GED, Bachelor's Degree, Master's Degree, PhD/Doctoral).
- Mentor: "An experienced employee who serves as a role model, provides support, direction and feedback regarding career plans and interpersonal development. A mentor is someone who is in a position of power, who looks out for you, gives you advice and/or brings your accomplishments to the attention of other people who have power in the company" (Fagenson, 1992, p. 53).
- Assistant coach's total income: the total amount of annual income the assistant coach receives from being employed as an assistant coach (e.g. salary, camp income, car stipend, per diem). Total amount the subject would report on their income taxes as ordinary income before withholdings.
- Professional or Career Development Opportunities: Conference attendances, capstone clinics, leadership seminars, continuing education classes, etc.

Assumptions

1. It is assumed that all subjects will answer the questions honestly and completely
2. The completion of the study is voluntary for all subjects

Limitations

1. This study is limited to current assistant volleyball coaches at NCAA Division I universities with published e-mail addresses

2. Because this study is voluntary there could potentially be a non-response bias depending on the response rate
3. This study will not consider if a current assistant coach has previously been a head coach, which is relatively common at the NCAA DI level in volleyball
4. This study population will not include volunteer assistant coaches or volleyball Director of Operations that also may have career aspirations to be a head volleyball coach.

Delimitations

1. This study is limited to full time employed NCAA Division I volleyball assistant coaches on staff in the 2010 season and therefore results may not be generalized to assistants in NCAA DII or DIII or NAIA or assistant coaches in other sports.

Significance of Study

There are many professional organizations including NACWAA (National Association of Collegiate Women's Athletic Administrators), the Women's Sports Foundation and the NCAA focusing efforts on increasing opportunities for women in leadership positions in intercollegiate athletics. It would be beneficial to these organizations and the membership they serve who see benefits in having women in head coaching positions to have a better understanding of why there are increasingly fewer number of women leading women's teams and to be able to predict what experiential or psychological factors make a coach more likely to pursue head coaching. For example, if Cunningham et al.'s (2003) research is confirmed in the NCAA Division I volleyball population that there is a significant relationship between self-efficacy and head coaching intentions, these organizations can address the cause of lower self-efficacy in female assistants and potential solutions for

increasing self-efficacy. Similarly, if the level of mentor relationship is found to have a significant positive relationship with head coaching intentions, these organizations can work to develop a formal mentoring program for female volleyball coaches. This awareness could assist in raising the number of women aspiring to head coaching and in turn increase the size of the pool of qualified female candidates.

II. REVIEW OF LITERATURE

In 1972, Title IX of the Education Amendments became law bringing increased participation opportunities for females in youth, interscholastic and intercollegiate sports. Correspondingly, the financial support for women's teams also grew leading to an increased number of coaching positions for women's teams (Everhart & Chelladurai, 1998). Higher pay, increased status and visibility of women's sports made coaching women's teams a more desirable profession for both male and female coaches. The supply of qualified female coaching candidates, at least in the early years after the passage of Title IX, was outpaced by the growth in the number of teams (Welch & Sigelman, 2007). This may explain an initial drop in the proportion of women coaching women's teams, but now almost 40 years after the passage of Title IX and the large increase in numbers of female athletes participating at the collegiate level, one would think that the proportion would have reversed and more females would be coaching. In fact in all women's sports the percentage has steadily decreased, flattening out the last few years at around 43% (Acosta & Carpenter, 2010). Kilty (2006) clearly summarizes the issue explaining "with the highest recorded number of women participating as athletes and the continued decrease in representation of women in positions of leadership, it is important to advance the understanding of why women are not attracted to the profession of coaching and why once involved, they chose to leave" (p. 223).

Many researchers have attempted to determine why this trend is occurring. Biennially, Acosta and Carpenter release “Women in Intercollegiate Sport: A longitudinal, national study” reporting on the status of all women’s (athletes, administrators, coaches and athletic trainers) involvement and support in intercollegiate athletics. This report provides a breakdown of percentage of female head coaches by sport and paid female assistant coaches. Women’s volleyball is reported as the second most offered women’s sport with 96.8% of schools offering the sport. In Division I volleyball 50.9 % of head coaches are female according to the 2010 report (Acosta & Carpenter, 2010). The EADA online system for 2008 reports an even lower percentage for Division I women’s volleyball female head coaches at 43.4% (US Department of Education, 2010).

Sartore and Sagas (2007) sought to statistically verify the pattern of the observed trends in Acosta and Carpenter’s longitudinal data. Specifically the purpose of their study was to examine the direction, magnitude, shape, and significance of the trends associated with participation opportunities for women within intercollegiate athletics, including females as head coaches. In the first part of the study they confirmed that participation opportunities afforded to women within intercollegiate athletics have dramatically increased since the passage of Title IX, while the proportion of female head coaches of these teams have decreased and that these trends are nearly identical in shape and magnitude, but opposite in direction (Sartore & Sagas, 2007). Sartore and Sagas also noted that although the downward trend for women in head coaching positions continues, the proportion of female assistant coaches has not shown statistically significant changes over the past few years.

Welch and Sigelman (2007) using the Department of Education files on equity in college athletics drew data on women's basketball, volleyball, soccer and softball. They tested their hypothesis that female coaches would be found disproportionately in (1) institutions that provide more modest support for women's athletics, (2) smaller and poorer institutions, and (3) less prestigious sports, (4) that women coaches would be more likely to be found in institutions with women athletic directors, and (5) finally that women coaches would be less likely to be found in more traditional (Southern, religiously affiliated and private) institutions. They based their hypothesis on studies of occupational gender stratification and the basis of that system being shaped by gender relationships inside and outside the workplace, especially by the traditional role of women as family care givers (Welch & Sigelman, 2007). Upon data collection and analysis Welch and Sigelman (2007) found that in general women coaches were more likely to be employed in larger and more visible institutions and those that provided more resources to women's sports.

Welch and Sigelman (2007) concluded that these findings were contrary to their expectations based on women's employment in other fields. For example, women are more likely to be partners in small less prestigious law firms or CEOs of small businesses as opposed to Fortune 500 companies. Welch & Sigelman (2007) imply that there is a high demand for female coaches for women's teams and that they may be valued more than male coaches and therefore only the largest and richest institutions can afford to hire them. Although the predictive model created in this analysis was strong at 13% and 22% for women's basketball and softball respectively, it was a poor predictor for the

employment of women coaches in volleyball and soccer at 8% and 3% (Welch & Sigelman, 2007).

Explaining the Decline

Researchers have used many theoretical frameworks and methodologies in attempt to explain the consistent decline of female coaches. From the mid-1980s to today, the decline has been looked at from many different angles and perspectives. There seems to be a clear split on researchers examining the decline from an industry or organizational perspective and those examining it from an individual or psychological perspective (Sagas & Cunningham, 2008). This most likely stems from initial research by Acosta and Carpenter (1988) finding that the men in collegiate athletics attributed the decline of female coaches to the individual (e.g., lack of qualified female coaches, time constraints placed on females due to family duties) while the women attributed the decline to structural variables (e.g., discrimination, lack of support system, old boys club). Knoppers (1987) argues that the individual model encourages the belief that women bring more deficiencies than assets to the athletic workplace; that it is based on the assumption that the worker shapes the workplace (Kanter, 1977).

Structural Explanations

Knoppers (1987) employs Kanter's (1977) theory that three structural determinants of the workplace shape gender differentiated work behavior: opportunity, power and proportion (Knoppers, Meyer, Ewing, & Forrest, 1990; Knoppers, Meyer, Ewing, & Forrest, 1991; Knoppers, 1992). She explains that women (or men) who see little opportunity to advance in a profession will exit the profession sooner; those with less access to resources and therefore power, tend to be less satisfied with their jobs and

finally the lower the gender proportion (women to men) the more likely women are treated as tokens (Knoppers, 1992). This model supports the research that has found that women leave the profession of coaching at a faster rate than their male counterparts (Hart, et al., 1986, Knoppers et al., 1991; Sagas et al., 2000). Specifically Hart et al. (1986) found that the changing proportions in the gender ranks of high school coaches could be attributed to the faster turnover of female coaches and a reduced entry of women into the profession.

Fagenson (1990) built upon the concepts suggested by Knoppers (1992) and Kanter (1977) to develop a theoretical framework called Gender Organization System (GOS) to explain the underrepresentation of women in leadership position. Within this framework Fagenson explains women's limited opportunity for advancement "can be due to their gender, the organizational context and/or the larger social and institutional system in which they function" (Fagenson, 1990, p. 271).

Inglis, Danylchuck and Pastore (2000) examined the multiple realities of women's work experiences in a qualitative study of eleven female coaches and athletic administrators. The results reflected the problems that women encountered at work, how organizations succeeded and failed in empowering them and the impact that an empowered female could have on the organization. Using Merriam's (1998) framework, Inglis et al., (2000) identified three categories that emerged from their interviews: issues of support, gender differences and change.

Homologous Reproduction

Inglis (1988) presented a description of the major philosophical and organizational changes that occurred within the governance of women's intercollegiate

sport. Prior to the passage of Title IX women managed most women's sport programs in the United States. A national philosophy of "a sport for every girl and a girl for every sport" and the strong relationship between physical education and athletics stemmed from the fact that the same women were managing the curriculum and the athletic programs (Inglis, 1988). In 1966, the Commission of Intercollegiate Athletics for Women (CIAW) was formed followed by the Association for Intercollegiate Athletics for Women (AIAW) in 1971 by women in physical education who were able to design a governance model that reflected the philosophy emphasizing the education values and enhancement of individual's potential in sport regardless of commercial appeal (Inglis, 1988). With the passage of Title IX and the resulting influx of resources into women's intercollegiate sports the NCAA in 1980 decided to establish 10 women's championships. With the loss of members to the NCAA, the AIAW was unable to sustain their championships and ultimately the organization (Acosta & Carpenter, 1985). As the female physical educators who once ran the women's athletic programs in the AIAW were engulfed by their NCAA male counterparts, few female administrators were retained; often only one remained in the organization with the newly developed title of Senior Women's Administrator (Inglis, 1998). The NCAA's Race and Gender report for 2008-2009 revealed 81.8 % of athletic directors being male and 99% of Senior Women's Administrators being female. At the Division I level the divide is even greater with 91.8% of the athletic director positions being male (NCAA, 2010). The dominance of white males in the highest leadership positions in both intercollegiate and interscholastic athletic departments have lead many researchers to explore Kanter's (1977) theory of homologous reproduction as a reason for the decline of female coaches in the now male dominated athletic departments.

Acosta and Carpenter (1985, 1988) found that the number one perceived reason for the decline in female head coaches was the success of ‘old boys club’ networks with the third most given response being the failure of a ‘old girls club’ network. Based on these findings researchers have also looked to Kanter (1977) and the theory of homologous reproduction as a potential explanation for the decline of female coaches (Stangl & Kane, 1991; Lovett & Lowrey, 1994; Sagas, Cunningham & Teed, 2006; Whisenant, 2008; Aicher & Sagas, 2009). Kanter (1977) defines homologous reproduction as the process in which the dominant group in an organization strived carefully to guard power and privilege by reproducing themselves in their own image. Stangl and Kane (1991) in their study of 937 public high schools suggest that it is at the administrative level that individuals have the power and opportunity to determine who gets hired or fired (p. 50). Lovett and Lowrey (1994) and Stangl and Kane (1991) both found that at the interscholastic level, the sex of the athletic director significantly predicted the proportion of female coaches within the organization. Specifically, there were significantly more female coaches present in organizations with female athletic directors (Stangl & Kane, 1991; Lovett & Lowrey, 1994). Both studies found that homologous reproduction was present for both genders, with Lovett and Lowrey (1994) recognizing that the ineffectiveness described in the Acosta and Carpenter studies (1985, 1988) of a good old girls club is founded in the scarcity of administrative structures with female leadership, rather than an inability for females to reproduce their own image in the organization (Lovett & Lowrey, 1994).

Occupational Closure

West, Green, Brackenridge and Woodward (2001) could present a viable case for why it seems to be accepted in the intercollegiate athletic world for women to hold the position of Senior Women's Administrator or Assistant Coach, but not that of Athletic Director or Head Coach. West et al., use Witz's (1990) model of occupational closure, originally used to analyze the medical profession, to analyze women's experiences as coaches. The model of occupational closure provides "an account of gender inequality in a single sphere of work, but one where men and women typically occupy different roles" (West et al., 2001, p. 85). West and her colleagues interviewed 20 female coaches at different levels finding that interviewees believed "their sustainability as coaches was questioned because of women's imputed lack of physical and mental strength, qualities deemed essential for a coach" (West et al., 2001, p. 87).

Psychological (Individual) Explanations

Although some researchers argue that an individual psychological perspective or model is essentially blaming the victim, there has been significant research with this focus including recognition that human agency is shaped by pressures external to the individuals (Cunningham, 2008). One can also make the argument that while it may take a significant amount of time to change an organization let alone an industry, if one has the ability to identify individuals that would succeed most within the organization/industry to begin to reverse a trend, the research could be considered highly practical.

Research among coaches has indicated that women, compared to men, leave coaching at an earlier age (Sagas et al., 2000; Knoppers et al., 1991) and that men often

fill the positions left by female coaches (Hart et al., 1986). Weiss and Stevens (1993) found that both current and former female coaches perceived higher levels of satisfaction from alternative activities than from coaching itself. Researchers looking at intercollegiate assistant coaches have also found that female coaches possess less desire to pursue head coaching positions than their male counterparts (Cunningham & Sagas, 2002; Cunningham & Sagas, 2007). Further research as to why these gender differences exist employ a variety of theoretical models including social exchange theory (Weiss & Stevens, 2003), human capital theory (Sagas et al., 2000), identity theory (Sartore & Cunningham, 2007), self-efficacy theory (Cunningham et al., 2003), social cognitive career theory (Everhart & Chelladurai, 1998; Cunningham, Doherty & Gregg, 2007), and theory of planned behavior (Sagas, Cunningham, & Pastore, 2006),

Sex Role Socialization

Researchers have used variations of sex role socialization theory to examine the underrepresentation of female head coaches, especially in studies of athletes' preference for male or female coaches (Weinberg, Reveles, & Jackson, 1984; Parkhouse & Williams, 1986; Weiss & Stevens, 1993; Hasbrook, Hart, and Mathes, 1990; LeDrew and Zimmerman, 1994; Habif, Raalte and Cornelius, 2001). Knoppers (1992) explains that sex role socialization occurs when we learn gender-appropriate behavior in childhood and adolescence and are assumed to have internalized these views by the time we are adults. As girls do not see many female coaches and are not brought up to believe that coaching is a viable career choice for women, they do not choose or even consider entering the profession (Knoppers, 1992). Knoppers (1992) disputes this perspective citing Sage's (1975) contention that a history of athletic participation seems to be part of the job

socialization pattern for coaches and therefore with the increased participation opportunities created by Title IX along with the increase of coaching jobs created that the proportion of female coaches should be increasing, which it is not.

A few researchers have examined the idea that potentially due to sex role socialization athletes may prefer male coaches to female coaches. Parkhouse and Williams (1986) in assessing athletes' attitudes toward male and female coaches asked basketball players to evaluate hypothetical coaches after reading coaching philosophy statements. Both male and female athletes rated the male coaches more favorably than the female coaches even when the female coaches were described as having better coaching records than the male coaches. Weinberg et al. (1984) found similar results in regards to the male athletes exhibiting negative attitudes toward female coaches, but in contrast found that the female athletes did not perceive a difference in the male and female coach's abilities.

Habif et al., (2001) specifically looked at male and female basketball and volleyball players' assessments of male and female coaches. Significant to this study, they found that the volleyball athletes reported no significant preference in their coaches' gender. Habif et al., suggest that volleyball may be looked at as a gender-neutral sport to explain the lack of bias for a male or female coach (Habif et al., 2001). This result contrasts the LeDrew and Zimmerman (1994) finding that Canadian volleyball athletes did in fact prefer male coaches to female coaches. The authors are quick to point out that few of their athletes have had the opportunity to have a positive experience with a female coach due to the declining numbers of females in the profession. They explain that "the athletes' evaluation of the capabilities of a female coach will necessarily be colored by

their present environments, their past experiences, and their personal biases regarding what traits females possess and what is ‘appropriate’ feminine behavior” (LeDrew & Zimmerman, 1994).

Work Experiences

Researchers have also examined the work environments within intercollegiate athletics and their effects on the retention of female coaches and administrators (Inglis, et al., 1996; Inglis et al., 2000; Cunningham & Sagas, 2003). Recently researchers have begun to specifically examine the relationship of work-family conflict with pay satisfaction, coaching turnover intentions (Ryan & Sagas, 2009), organizational support, job-life satisfaction (Dixon & Sagas, 2007) and the head coaching experiences of mothers (Bruening & Dixon, 2008). Inglis et al. (1996) used Knoppers’ (1992) structural, individual and social relational approaches to develop a scale of retention factors that resulted in three empirically supported factors: work balance and conditions, recognition and collegial support and inclusivity (Inglis et al., 1996). Using feedback from experts in the field of sport management research, faculty, and students, Inglis et al., (1996) administered a survey to 77 athletic administrators and 760 coaches of intercollegiate athletic programs in the United States and Canada asking them to rate on two separate 7-point Likert scales the degree of importance and the degree of fulfillment of each item regarding staying in the subject’s current position. The resulting three-factor solution included 33 items that explained 41.6% of the variance for the importance scale and 40.2% of the variance for the fulfillment scale. This exploratory study resulted in three factors: (1) work balance and conditions, (2) recognition and collegial support, and (3) inclusivity. These factors reflect the significant aspects of the athletic work environment

that athletic administrators and coaches have identified as important to staying in their positions (Inglis et al., 1996).

Cunningham and Sagas (2003) looked specifically at assistant coaches turnover intentions and to what extent organizational work experiences explained them. The subjects included NCAA Division I first assistant coaches of various women's teams in geographically diverse athletic conferences. One of the most significant findings was that women anticipated leaving the coaching profession sooner than men with 89.2% anticipating leaving before age 55. These results supported similar findings in intercollegiate athletics (Knoppers et al., 1991; Sagas et al., 2000) of gender difference in occupational turnover intent. In regards to the work experiences of the assistant coaches surveyed, results from a MANCOVA revealed that how the coach experiences work within an organization can predict when a coach plans to leave the profession. Specifically based on the Inglis et al., (1996) scale of retention factors, Cunningham and Sagas also found both work balance and conditions and inclusivity predicted when a coach planned to exit the profession with the effect size of inclusivity being much larger than work balance and conditions (Cunningham & Sagas, 2003).

Self-Efficacy and Head Coaching Intentions

Everhart and Chelladurai (1998) refuted the female deficit model (Hart et al. 1986) in their findings of no significant differences based on gender in coaching self-efficacy or desire to be a head coach in 191 Big Ten basketball student-athletes (94 men and 97 women). Their study of occupational preference for coaching was theoretically based on Bandura's (1977) social cognitive career theory measuring self-efficacy,

valence and perceived barriers (Everhart & Chelladurai, 1998). In conclusion Everhart and Chelladurai (1998) argued:

Our results show that the reason for the underrepresentation of women in coaching ranks do not reside in the women themselves. Our results are consistent with the viewpoint of Knoppers (1987) and Lenskyj (1994) that refute the “female deficit model” as an explanation for the lack of women in coaching positions (p. 197).

The major limitations of this study were the subjects being from one of the most high profile sports, in a BCS conference of NCAA Division I, and that they were student athletes that did not have any coaching experience.

Kamphoff and Gill (2008) found contrary results to Everhart and Chelladurai (1998) in their investigation into student-athletes interest in and perceptions of the coaching profession. They found that men are more likely than women to intend to enter coaching at the Division I and professional levels and that gender and racial differences were identified in reasons and barriers for entering the profession (Kamphoff and Gill, 2008). Kamphoff and Gill (2008) recognize that female athletes may not see others like them in Division I and professional level coaching positions and therefore may not recognize those careers as viable options.

Sagas, Cunningham and Ashley (2000) were one of the first to examine the women’s coaching deficit through assistant coaches of women’s teams. Citing Acosta and Carpenter (1998), Sagas et al., point out that working as an assistant coach is often the first step in obtaining a head coaching position; therefore they are an important group to examine being the most immediate pool of potential female head coaches. Significant

to the current research, findings from this study revealed that although the female assistants may have perceived greater advantage and more opportunity to occupy head coaching positions, they were not pursuing head coaching jobs as frequently (Sagas et al., 2000).

More recent studies of current assistant coaches have found that women typically display less desire to apply for head coaching positions than men (Cunningham & Sagas, 2002; Cunningham et al., 2003). Cunningham et al., (2003) surveyed 173 NCAA Division I assistant coaches of women's teams representing a wide range of sport offerings including track, soccer, softball, volleyball and basketball. Using aspects of Bandura's (1977) social cognitive theory, the authors examined the relationship between coaching self-efficacy, desire to become a head coach, and occupational turnover. Cunningham et al., define coaching self-efficacy as "one's confidence in his or her capacity to perform the coaching tasks effectively" (Cunningham et al., 2003, p. 128). Using an ANOVA analysis with gender as the independent variable, Cunningham et al. (2003) found that the male assistant coaches had a significantly greater desire to become a head coach and significantly greater coaching self-efficacy than their female counterparts. Additionally, female assistant coaches had significantly greater occupational turnover intentions than their male counterparts (Cunningham et al., 2003). Using multiple regression analysis, the authors found that coaching self-efficacy accounted for 13% of the variance (with significant Beta weight) when desire to become a head coach served as the dependent variable. Due to a 45% response rate, the researchers recognize the possibility of a non-response bias. They also specifically address the limitation that they only examined the relationship between coaching self-

efficacy with two outcome measures, and recognize that there are likely environmental factors that also influence a participant's desire to become a head coach. Future research was recommended to include contextual variables to assemble a more complete picture of the role self-efficacy has in the career decision-making process (Cunningham et al., 2003).

Cunningham, Doherty and Gregg (2007) conducted a similar study of head coaching intentions among assistant coaches of women's teams using social cognitive career theory as the framework and assistant coaches from the Ontario University Athletics League in Canada as the subjects. Consistent with the Cunningham et al. (2003) study, they found that men in the sample expressed greater interest in becoming a head coach and greater intentions to seek such employment than did women. Although confirmation of the Cunningham (2003) findings may be useful, other factors such as small sample size, potential differing cultural factors and organizational differences (for example, most NCAA DI women's teams assistants are full time paid employees where the subjects in this study were part time and often held another full time job outside of coaching), makes this study less relevant to the NCAA Division I volleyball population.

Theory of Planned Behavior

Based on the Cunningham et al. (2003) study finding that female assistant coaches expressed less desire to pursue head coaching than their male counterparts. Sagas, Cunningham and Pastore (2006) hypothesized that the theory of planned behavior would be a predictive and explanatory model of head coaching intentions for both male and female assistant coaches of women's teams. This study attempted to address why the gender differences existed in head coaching intentions by examining three major factors

of the theory: attitudes, subjective norms, and perceived behavioral control. Where the Cunningham et al.(2003) study did not provide insight into other social or environmental factors that could be influencing the assistants' desire to become a head coach, the Sagas et al. (2006) study aimed "to establish the most important behavioral, normative, and control beliefs specific to male and female coaches' head coaching intentions" (p. 696). After sending a total of 2,070 questionnaires to first assistant coaches in Division I and II in basketball, volleyball, soccer and softball there were 710 usable responses. Sagas et al. (2006) determined that a coach's attitudes, subjective norms and perceived behavioral control predicted intentions to pursue a head coaching position within 3 years. They also confirmed female assistants' aspirations to become a head coach were significantly lower than their male counterparts. The authors recognized that more research could be done to focus more on the social factors and constraints that may shape intentions. Based on their study, the psychological factors they examined did not appear to negatively impact head coaching intentions -- which does not necessarily provide an explanation for the gender gap in intentions to pursue head coaching (Sagas et al., 2006).

Solutions: Professional Development and Mentoring

Many practitioners, in attempting to reverse the decline of female coaches since Title IX was enacted, have implemented professional development programs for female coaches to provide them with the skills and confidence to pursue and retain head coaching positions. The NCAA, NACWAA and the USOC all host annual leadership seminars and clinics for female coaches. Knoppers (1987) argued that although such programs may increase skills and self-esteem, they have little impact on occupational gender differences. Researchers have found that some of these programs may be working

to retain and recruit female coaches. Interscholastic programs in Colorado, Pennsylvania, Wisconsin and Oregon have demonstrated positive results by increasing percentages of female coaches and officials (Lough, 2001). Kilty (2006) interviewed attendees of the USOC Department of Coaching and Sport Sciences annual conference that is dedicated to: (a) promoting qualified assistant and head elite level coach retention, (b) attracting minority and young women into the field of coaching, and (c) providing educational information for coaching effectiveness (Kilty, 2006, p. 223). The author presents the barriers that the female coach attendees reported facing as four subcategories: (1) unequal assumption of competence, (2) hiring from a principle of similarity, (3) homophobia, and (4) lack of female mentors (Kilty, 2006, p. 223). She found that the attendees believed that male coaches are automatically assumed to be more competent than female coaches and that female coaches needed to prove themselves as capable, whereas males were just assumed to be capable (Kilty, 2006, p. 224). This perception could support the Cunningham et al. (2003) finding that male coaches have higher coaching self-efficacy than their female counterparts. That same study found that the female assistant coach subjects had significantly lower desire to pursue head coaching than male assistants (Cunningham et al., 2003). Kilty reports that one of the coping strategies in response to the perceived choices of abandoning professional pursuits to start a family was to decline to seek head coaching positions and to remain assistant coaches (Kilty, 2006, p. 227).

Mentoring

Another barrier reported by Kilty (2006) as being discussed frequently was a lack of female mentors to provide guidance and to facilitate networking for young coaches. Many researchers and practitioners have suggested formal mentoring programs as a

solution to the decline of female head coaches (Cunningham et al., 2007; Kilty 2006; Lough, 2001; Pastore, 2003; Sagas et al., 2006; Weaver & Chelladurai, 1999). Although many researchers have recommended mentoring as a potential solution for the decline of females in leadership positions in sports, relatively little research has been done to examine if in fact mentoring would be a practicable solution.

Young (1990) was one of the first to examine the perceptions of mentoring in athletic administration. She surveyed 263 NCAA athletic administrators to identify and analyze the practices of mentoring and networking in college athletics. Collecting both quantitative and qualitative data, Young found that 94% of administrators advocated that all young professionals establish a mentoring relationship. The top five benefits received by these administrators from their mentors were: (1) encouragement and support, (2) advice, (3) an opportunity to increase their knowledge, (4) guidance and direction, and (5) constructive criticism.

Weaver and Chelladurai (1999) developed a mentoring model for management in sport in response to mentoring often being proposed as a means to facilitate the career progress of women and minorities in leadership roles. They defined mentoring “as a process in which a more experienced person (i.e., the mentor) serves as a role model, provides guidance and support to a developing novice (i.e., the protégé), and sponsors that individual’s career progress”(Weaver & Chelladurai, 1999, p. 25). Drawing from literature on the importance of mentoring in facilitating one’s progress through a career, the authors propose a model that incorporates mentor-protégé compaibility, barriers to mentoring, the phases of mentoring, organizational practices and finally the outcomes for the protégé, the mentor and the organization (Weaver & Chelladurai, 1999).

Weaver and Chelladurai (2002) put their model to the test in their study of athletic administrators from NCAA Division I and Division III institutions. They found that an equal proportion of males and females had experienced mentoring relationships, and mentored individuals were more satisfied with work than their non-mentored counterparts (Weaver & Chelladurai, 2002). Weaver and Chelladurai also found in this study that mentored individuals were found to have reached higher positions within their organizations at a younger age than their non-mentored counterparts. Most literature on mentoring and the benefits can be found in business and, more recently, education literature. Although there is some literature on mentoring in athletics, few studies look specifically at mentoring coaches (Bloom, Durand-Bush, Schinke, & Salmela, 1998; Avery, Tonidandel, & Phillips, 2008; Narcotta, Peterson, & Johnson, 2009).

Bloom et al., (1998) interviewed 21 coaches in a qualitative study to: (a) examine whether expert coaches were mentored by a coach during their athletic careers, (b) determine whether expert coaches were mentored by a coach during the early stages of their coaching careers, and (c) investigate the extent to which expert coaches felt it was important to mentore athletes and young, developing coaches (Bloom et al., 1998). They found that the subjects of their study were mentored both as athletes and as young coaches and advocated for more structured mentoring programs. Although this study was small in numbers due to its qualitative nature, it allowed the researches to find out the specifics of the coaches relationships with their mentors and their protégés.

Avery et al., (2008) and Narcotta et al., (2009) both use Kram's (1985) framework of mentor functions in their research. Kram (1985) indentified two distinct sets of mentor functions – career and psychosocial – that are the fundamental reasons a protégé benefits

from a mentoring relationship. Career functions are those that enhance advancement, for example, increased salary or promotions. They include *sponsorship, exposure and visibility, coaching, protection, and challenging assignments*. Psychosocial functions are those that develop one's career through personal growth, for example building confidence and sense of professional identity. These functions are *role modeling, acceptance and confirmation, counseling, and friendship* (Kram, 1985).

Avery et al. (2008) examined how sex-similarity on a coaching staff affects mentoring in 97 NCAA Division I women's basketball head coaches. They found that both sex and attitudinal similarity were associated with receiving more psychosocial and career mentoring when the subjects were assistant coaches. Avery et al. (2008) also found that those who had white male mentors reported receiving more career mentoring. In the practical implications of the study, their results suggest that female assistants to male head coaches are apt to receive less mentoring, especially psychosocial, than those who assist female head coaches.

Narcotta et al. (2009) aimed to identify mentoring functions reported by NCAA Division I assistant women's soccer coaches and examine the gender impact of the head coach-assistant coach dyad. NCAA Division I soccer like NCAA Division I volleyball, has seen an increased percentage of men in head coaching positions over the past 15 years with 66.9 percent of head coaches being male (Narcotta et al., 2009). Narcotta et al. found that although there were not significant differences in perceived mentor functions based on their subjects gender, they did find a significant difference in the psychosocial functions. They postulate that due to athletics being a male dominated profession, female assistant coaches may not feel comfortable socializing with a male head coach/mentor

outside of the work environment (Narcotta et al., 2009). The authors call significance to this finding citing the Sagas et al., (2006) finding that female assistant coaches' head coaches were critical in shaping their head coaching intentions where male assistant coaches looked toward a strong social network to obtain head coaching positions (Sagas et al., 2006).

Measuring Mentor-Protégé Relationships: Mentor Function Questionnaire

Multiple instruments have been developed using Kram's (1985) framework to measure mentoring functions (Ragins & McFarlin, 1990; Scandura, 1992; Pelligrini & Scandura, 2005). Weaver and Chelladurai (2002) and Narcotta et al. (2009) used Ragins and McFarlin's (1990) *Mentor Role Instrument* to assess the extent to which subjects perceived their mentors as carrying out Kram's (1985) career functions and psychosocial functions. Subjects in the survey without reported mentors responded to a preference version of the MRI instrument that read, "If I were to have a mentor, I would prefer my mentor to. . ." This instrument served the objective of this study well in measuring if mentors were successfully performing the functions and the preferred functions of a mentor.

In 1988, Scandura and Katterberg developed a *mentoring functions questionnaire* assessing the extent to which subjects' received the career and psychosocial functions and adding items to measure role modeling functions (Fagenson, 1992). Fagenson (1992) used this mentoring functions questionnaire to verify their subjects' responses in a survey of 173 technology employees whether they were a protégé or a non-protégé. In 2004 Castro and Scandura later simplified their instrument to 9 items in three scales: career functions, role modeling, and psychosocial (Pelligrini & Scandura, 2005). Due to

Fageson's (1992) successful use of this scale to verify a protégé having a mentor, the simplified version used by Pelligini & Scandura (2005) will be used for this study.

Conclusion

The initial decline of females coaching women's teams following the enactment of Title IX was dramatic, but potentially more alarming is the continued decrease over the last 30 years. One would think that with the significant and continual increase of female participation opportunities that more females would be ascending to head coaching positions in the sports they have competed in. As previously summarized, many authors have examined this issue and applied various theoretical frameworks in attempt to explain and understand the decline. A common trend in the conclusion of this literature is to point out the complexity of the issue and that examining the decline from either a structural perspective or a psychological perspective alone may not provide the whole picture. This study will attempt to build on the existing literature that has shown self-efficacy to be a significant predictor of head coaching intentions (Cunningham et al., 2003) and include additional career related factors (e.g., level of education, mentoring experienced, current income) that may help to explain an assistant coaches intentions to pursue head coaching.

Another common theme in the literature is to recommend formal mentoring programs and professional development or training as solutions to the perception of the lack of qualified female candidates. This study will examine the viability of these solutions by measuring the number of professional development events the subjects report attending and seeing if it has a significant relationship to head coaching intentions. Using the mentor functions questionnaire (MFQ-9), this study will also measure the

mentor functions the subjects' have experienced in their coaching career and examine the relationship between mentoring and head coaching intentions (Pelligrini & Scandura, 2005).

III. METHODOLOGY

The purpose of this study is first to measure the head coaching intentions of NCAA Division I assistant women's volleyball coaches and to see if there is significant differences in these measures based on gender. Additionally, this study identifies significant factors shaping head coaching intentions of both male and female assistant coaches. A sample of current NCAA Division I women's volleyball assistant coaches was utilized for this study.

Instrumentation

The data for this study was collected through surveys e-mailed to 510 assistant coaches of NCAA Division I women's volleyball teams. Participants were e-mailed a link to the online survey questionnaire asking them to provide demographic information and to respond to various items designed to measure coaching self-efficacy, level of mentoring experienced, and desire to become a head coach. Assistant coaches with unpublished e-mail addresses were excluded from the survey. Demographic information collected included age, gender, number of children/household size, current income, level of playing experience, and level of education achieved (Appendix A).

In order to maintain confidentiality pertaining to career intentions, the subject's name or institution was not asked in the survey. The subjects were assured that all of their

answers would only be used for the purposes of this study. All information received was then collected and categorized for analysis.

Coaching Self –Efficacy

Subjects coaching self-efficacy was measured using a revised version of the Everhart and Chelladurai (1998) instrument that measured the role of self-efficacy in the preference for coaching as an occupation of 191 Big Ten university basketball players. This instrument consisted of a 35-item scale measuring the subjects' perceived confidence in their capacity to perform head coaching tasks effectively. Everhart and Chelladurai reported a very high internal consistency estimate ($\alpha = .96$). Cunningham et al. (2003) used items incorporated from the Everhart and Chelladurai scale to measure the self-efficacy of assistant coaches of NCAA women's teams. Using an exploratory factor analysis Cunningham et al. reduced the items to 10 with an internal consistency estimate still considered high ($\alpha = .89$) and later reduced the items to 9 in a 2010 study of student-athletes head coaching intentions with an acceptable internal consistency estimate ($\alpha = .82$) (Cunningham & Singer, 2010; Cunningham et al., 2003, p. 129). Self-efficacy will be measured using the 9-item Cunningham & Singer (2010) instrument with subjects responding on a 7-point Likert scale ranging from 1 (no confidence) to 7 (complete confidence). A sample task is "accurately assess the abilities of your players" (Appendix A).

Mentoring Functions Questionnaire

Level of mentoring experienced by the subjects was measured using the mentor functions questionnaire (MFQ-9) used by Pelligrini and Scandura (2005). Fagenson (1992) used the mentor function questionnaire developed by Scandura (1992) on a 20-

item scale to confirm subjects' response to whether they were or were not a protégé in a mentoring relationship. The Scandura (1992) scale has since been refined to a 9-item scale (MFQ-9), with 3 items for each dimension of mentoring (career, psychosocial and role modeling) (Pellegrini & Scandura, 2005). An example of an item measuring career functions is "A mentor has helped me coordinate professional goals", psychosocial function is "I have shared personal problems with a mentor" and role-modeling functions is "I try to model my behavior after a mentor" (Appendix A).

Head Coaching Intentions

The subjects' desire/intention to become a head coach was measured by the same two items used by Cunningham et al. (2003) to measure the assistant coach subjects in their study. The two items for this measure were "How much desire do you have to become a head coach?" and "How likely is it that you will search and apply for a head coaching position during your career?" The first item was measured on a 7-point Likert scale ranging from 1 (no desire) to 7 (much desire) while the second item ranged from 1 (not likely) to 7 (very likely). The Cronbach alpha reliability estimates for this measure were very high ($\alpha = .91$) (Cunningham et al., 2003).

Subjects

Subjects of this study are assistant women's volleyball coaches from NCAA Division I institutions in the 2010 fall season. Only subjects with the title of "assistant coach" were included in the study. Volunteer assistants and Director of Operations personnel were excluded from this examination.

Survey Distribution and Collection Procedures

The survey questions were entered into the online survey service provider Survey Monkey's website and a link was assigned for the survey. After collection of subjects e-mail addresses through institutional websites, e-mails were sent to subjects containing a brief overview of the study and the link to complete the online survey (Appendix B).

Data Analysis

The data was entered into the statistical program SPSS for Macintosh version 17.0. The information was coded by gender, age, number of children, household size, level of playing experience, number of professional development activities, level of education, number of years coaching, average score of mentoring functions questionnaire, average score in coaching self-efficacy items and average score in head coaching intentions. Means and standard deviations were calculated for all demographic items. Independent samples T-tests were utilized to compare head coaching intentions with gender serving as the independent variable. Finally, in order to identify significant variables in explaining head coaching intentions a multiple linear regression analysis was run. An inter-correlation analysis was run to identify independent variables that were highly correlated in order to prevent redundancy in the model. The remaining variables were run through a multiple linear regression analysis in SPSS to determine if they were significant in explaining the variance in head coaching intentions. Separate multiple linear regression analysis were then run only using the male subjects and another run only using the female subjects. The same explanatory variables used in the complete model were used for the split gender models.

IV. RESULTS

The survey (Appendix A) was distributed via e-mail to 510 NCAA Division I assistant volleyball coaches. Participants were directed to a link at website www.surveymonkey.com to provide their responses. The raw data was then downloaded from www.surveymonkey.com and imported into Microsoft Excel. Level of mentoring, level of head coaching self-efficacy and level of head coaching intentions had anywhere from two to nine questions measured on either a five or seven-point Likert scale. Columns were added in Microsoft Excel to calculate the averages for these factors (Mentoring, Self-efficacy, Head Coaching Intentions), and these averages were used in the data analysis. The raw data was then imported into SPSS 17.0 for Mac for data analysis.

To answer RQ 1, an independent samples t-test was used to identify if there was a significant difference in head coaching intentions between male and female assistant coaches. Independent samples t-tests were also run for all the potential explanatory variables in order to get a clear description of the sample and to identify any significant differences between genders. To answer RQ 2, a multiple linear regression was used to determine if any of the demographic, experiential or psychological factors were significant in explaining head coaching intentions for the complete sample. To answer RQ 3, separate MLRs were run for only the female subjects and only the male subjects.

Description of the Sample

The invitation e-mail to participate in the study was sent to a total of 510 NCAA Division I assistant volleyball coaches. A total of 251 surveys were collected by December 20, 2010. All questions had to be answered for the survey to be useable, resulting in a sample size of 201, reflecting an overall response rate of 39%.

Descriptive Statistics & Comparative Analysis

Participants were asked to provide various demographic data including age, household size, level of education completed, number of children under 25 and total income. Experiential questions included level of volleyball playing experience, # of years playing volleyball, # of years coaching volleyball, # of professional development events attended and level of mentoring experienced. Psychological questions included the level of coaching self-efficacy and level of head coaching intentions. Descriptive statistics and comparative analysis using independent samples t-tests of the demographic, experiential, and psychological data along with appropriate tables are discussed in the following sections.

Demographic Data

Female participants (116) represented 58% of the sample and male participants (85) represented 42%, which the researcher considers close enough to the population gender makeup of 54% female and 46% male to consider it a representative sample.

Table 1

Descriptive Statistics of Demographic Data of Complete Sample

M	SD	95% CI
---	----	--------

Age	31.11	7.026	[30.13, 32.09]
Household Size	1.65	1.244	[1.48, 1.82]
# Children Under 25	.37	.809	[.26, .48]
Education	3.30*	.472	[3.24, 3.37]
Income	4.97**	3.387	[4.49, 5.44]

Note: M = Mean; SD = standard deviation; CI = confidence interval.

* Education was measured on a scale 1=High School/GED, 2=Associate/Junior College, 3=Bachelor's degree, 4=Master's degree and 5=PhD/Doctoral degree. The mean 3.30 falls in between a Bachelor's and a Master's degree.

**Income was measured using 12 ranges of \$5,000 starting at < \$25,000 and the last > \$80,000. The mean 4.97 falls in the range of \$40,000 - \$44,999.

Comparative Analysis of Demographic Data

As displayed in Table 2, there were significant differences in the age ($p<.0001$), household size ($p<.0001$), and number of children under the age of 25 ($p=.002$) between male and female subjects. Male subjects were an average of 6.24 years older than female subjects, with households .66 larger and .37 more children.

Table 2

Descriptive Statistics of Demographics by Gender

	n	Age		Household Size		# of Children	
		Mean	SD	Mean	SD	Mean	SD
Male	85	34.74*	7.611	2.03*	1.384	.58*	.967
Female	116	28.50	5.244	1.37	1.051	.21	.626

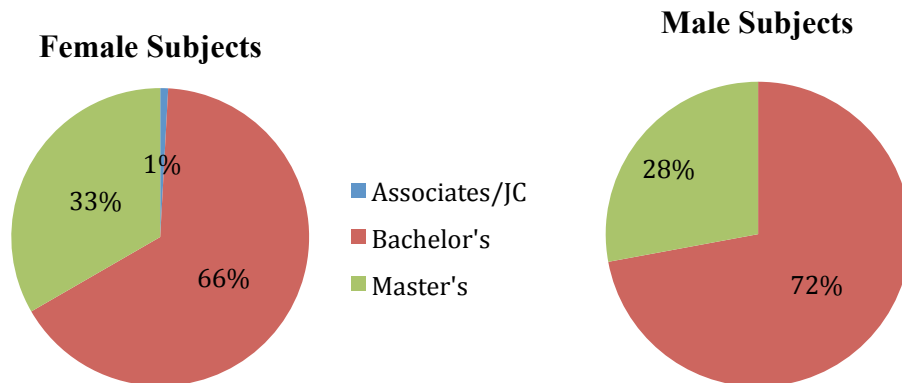
* $p < .05$

Level of Education

Level of education was measured on a scale from 1 (High School/GED) to 5 (Phd/Doctoral) (Appendix A). The mean level of education for female subjects was 3.32 compared to 3.28 for male subjects. The difference in the level of education was not significantly different with 33% of female subjects completing a master's degree compared to 28% of male subjects (see Figure 1).

Figure 1

Level of Education (Female vs. Male Subjects)



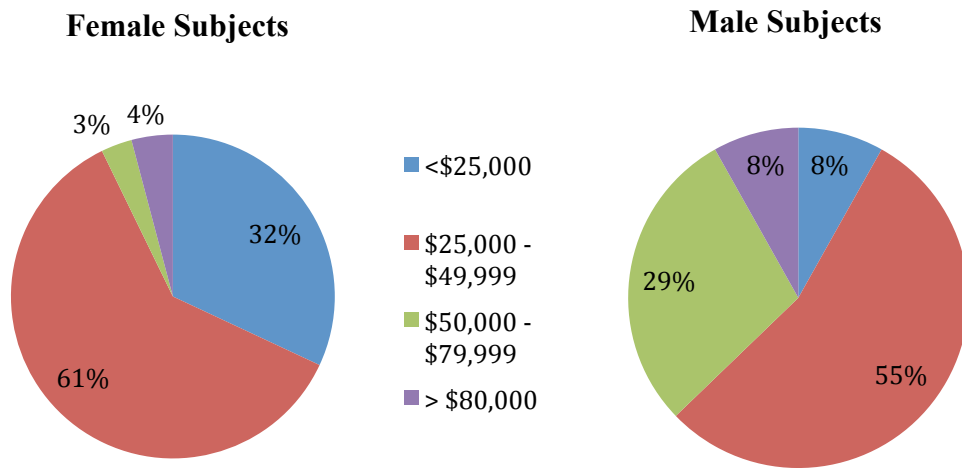
Income

The subjects were asked to select a range of their current income resulting from their assistant coaching employment including salary, camps, speaking engagements, etc. There were 12 ranges to choose from starting at less than \$25,000 (1) increasing in increments of \$5,000 until over \$80,000 (12). The mean income reported was 5.01 with a standard deviation of 3.404. The mean income fell into the range of \$40,000 - \$44,999. The mean income of the male subjects (6.05) was significantly higher ($p < .0001$) than the

female subjects (4.24). Thirty seven percent of male subjects made over \$50,000 compared to 7% of female subjects (see Figure 2).

Figure 2

Income (Female vs. Male Subjects)



Experiential Data

Table 3

Descriptive Statistics of Experiential Data of Complete Sample

	Mean	SD	95% CI
# years playing	13.38	6.291	[12.50, 14.25]
Level played	5.43*	1.486	[5.23, 5.64]
# years coaching	8.866	6.219	[8.001, 9.731]
Professional Development	2.91**	1.375	[2.72, 3.10]
Mentoring Experienced	3.652***	.963	[3.52, 3.786]

* Level played was coded from 1=none to 7=National Team/Professional. See Appendix A for all levels. **Professional development events attended was measured using ranges coded 1=none, 2=1-5, 3=6-10, 4=11-15, 5=15-20, 6=20-25, 7=25-30, and 8=30+.

*** Mentoring experienced was an average of 9 items measured on a 7 pt Likert scale.

Comparative analysis of experiential data

As displayed in Table 4, there were significant differences in the level played ($p < .0001$), total number of years coaching ($p < .0001$) and number of professional development events attended ($p < .0001$) based on gender. Female subjects reported playing a significantly higher level than male subjects. Male subjects coached an average of 5.94 years longer than female subjects and attended significantly more professional development events. The male subjects mean for attending professional development events (3.44) fell into the 6-10 events range and the mean for female subjects (2.53) fell into the 1-5 event range.

Table 4

Descriptive Statistics of Experiential Data by Gender

	# Years Played			Level Played		# Years Coaching		Professional Development		Mentoring Experienced	
	N	M	SD	M	SD	M	SD	M	SD	M	SD
Male	85	14.46	8.457	4.76	1.906	12.294*	6.821	3.44*	1.459	3.66	.903
Female	116	12.59	3.885	5.92*	.782	6.353	4.268	2.53	1.176	3.65	1.008

* $p < .05$

Level of Volleyball Played

The level of volleyball played was coded 1=none, 2=High School, 3=Junior College, 4=NCAA DIII, 5=NCAA DII/NAIA, 6=NCAA DI, 7=Professional/National Team. The mean of the sample for the level of volleyball played was 5.43 with a standard deviation of 1.486. The mean of the female subjects (5.92) was higher than the male subjects (4.76). Eighty-one percent of the female subjects played at least NCAA DI volleyball while 47% of the male subjects did the same.

Level of Mentoring Experienced

The mentoring experienced was measured using the MFQ-9 consisting of 9 total items and 3 different sections. Items 1-3 related to career mentoring, items 4-6 related to psychosocial mentoring, and items 7-9 related to role modeling. The averages were calculated for each section and also all 9 items as a whole. The mean of the total average (9 items) for the sample was 3.65 with a standard deviation of .962. Items were measured on a 5-point Likert scale. The mean for female subjects (3.64) was almost identical to the mean for male subjects (3.65). The mean for the role modeling items (3.92) was higher than both means for career mentoring (3.37) and psychosocial mentoring (3.66) in the complete sample.

Psychological Data

Coaching Self-Efficacy

Coaching self-efficacy was measured using an average of nine (9) items all measured on a 7 point Likert scale. The survey scale ranged from 1=strongly disagree to 7=strongly agree when subjects were asked to rate their ability to perform head coaching

tasks. The mean of the sample was 5.861 (SD = .7611, 95% CI [5.75, 5.97]). The mean of the male subjects was significantly higher ($p < .0001$) than the female subjects (see Table 5).

Head Coaching Intentions

Intention to pursue head coaching was measured using the average of two (2) items both measured on a 7 point Likert scale. The first item asked subjects to rate their desire to head coach from 1=no desire to 7=much desire. The second item asked subjects to rate how likely it is that they will apply for a head coaching position with 1=not likely and 7=very likely. The sample mean was 5.338 (SD=1.802, 95% CI [5.008, 5.589]. Male subjects reported significantly higher intentions to pursue head coaching ($p < .0001$) than female subjects (see Table 5).

Table 5

Descriptive Statistics of Psychological Data by Gender

		Coaching Self-Efficacy		Head Coaching Intentions	
	n	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
Male	85	6.108*	.635	5.929*	1.429
Female	116	5.68	.797	4.905	1.926

* $p < .0001$

Factors explaining Head Coaching Intentions

A correlation analysis was run using all 9 potential explanatory variables to examine the correlation of all the independent variables with the dependent variable (head coaching intentions) and their correlation to each other. The potential explanatory

variables Household and Number of Children Under 25 were highly correlated (.884) and therefore the Number of Children variable was removed. In addition the potential explanatory variable of Highest Level of Education Completed was removed from the model because all but one of the subjects responses only included Bachelor's or Master's degree. Due to the fact that only two answers were provided this variable ended up being categorical data and not interval data and therefore would not be appropriate in the regression analysis. This resulted in 7 of the potential 9 explanatory variables being entered into the multiple linear regression analysis.

A multiple linear regression analysis of the complete sample using a stepwise method resulted in a significant model ($p < .0001$) with an R^2 value of .129. The explanatory variables retained in the final model were level of volleyball played ($p < .0001$) and coaching self-efficacy ($p < .0001$) (See Table 6).

Table 6

Explanatory Factors of the Variance in Head Coaching Intentions

Head Coaching Intentions			
Model 2			
Variable	Model 1 B	B	95% CI
(Constant)	1.569	3.064*	[1.054, 5.074]
Household	-.024	-.029	
Level Played	-.235	-.285**	[-.444, -.127]
Years Coached	-.072	-.108	
Income	-.051	-.004	
Professional	.107	.086	

Development			
Mentoring Experienced	.131	.114	
Coaching Self-Efficacy	.643**	.652**	[.343, .962]
R ²	.074	.129	
F	15.849**	14.673**	

Note: N=201.

* $p < .05$

** $p < .01$

Factor Analysis by Gender

The sample was then split to answer RQ3 and determine if different variables explained the variance in head coaching intentions for males and female subjects. The same initial 7 explanatory variables were entered into a multiple linear regression analysis for the male subjects and then a separate analysis was run using only the female subjects. The multiple linear regression analysis run with the 85 male subjects did not produce a significant model ($p=.141$). The stepwise MLR analysis with the female sample did produce 3 significant models with the final model explaining 16.4% of the variance in head coaching intention. Like the overall model, Level Played and Coaching Self-Efficacy were significant. Additionally the explanatory variable of Level of Mentoring Experienced was also present in the final model (See Table 7)

Table 7

Explanatory Factors of the Variance in Head Coaching Intentions for Female Subjects

Head Coaching Intentions				
Model 3				
Variable	Model 1 B	Model 2 B	B	95% CI
(Constant)	1.259	4.143*	2.690	[-.708, 6.088]
Household	-.060	-.053	-.018	
Level Played	-.251	-.619**	-.584**	[-1.018, -.149]
Years Coached	-.157	-.177	-.170	
Professional Development	.051	.007	-.015	
Mentoring Experienced	.201	.183	.350*	[.022, .678]
Coaching Self-Efficacy	.642**	.779**	.773**	[.349, 1.198]
R ²	.071	.130	.164	
F	8.655**	8.476**	7.319**	

Note: N=116.

* $p < .05$.

** $p < .01$

V. DISCUSSION

Summary

Since the passage of Title IX in 1972, the number of female coaches occupying head coaching positions for women's intercollegiate athletic teams has dropped from over 90% to just 42.6% today (Acosta & Carpenter, 2010). Past research has suggested that female assistant coaches of women's teams possess less coaching self-efficacy and less intention to pursue head coaching than their male counterparts (Sagas et al., 2000; Cunningham et al., 2003; Cunningham et al., 2007). Opportunity to play Division I volleyball is offered 11 times more to females than males, which one would think would create a significantly larger candidate pool of females with playing experience that would qualify them to coach at the Division I level. If this is in fact the case, why are the majority of Division I head women's volleyball coaches male and why is the percentage of female head coaches continuing to decrease?

The purpose of this study is to examine the head coaching intentions of NCAA DI assistant volleyball coaches and to identify significant variables that explain the variance in head coaching intention. It also sought to examine any significant difference in head coaching intention and the variables that explained that intention based on the subjects gender. A survey response rate of 39% produced demographic, experiential and psychological data from a representative sample of the NCAA DI assistant volleyball coaches leading to significant findings in the comparison of head coaching intention

between genders and a significant model that explained 16.6% of the variance in head coaching intention.

Head Coaching Intentions

The significant finding that female assistant coaches have less intention to pursue head coaching than male assistant coaches is consistent with previous research (Sagas et al., 2000; Cunningham et al., 2003; Sagas et al., 2006; Cunningham et al., 2007). Sagas et al., (2000) found that female assistant coaches of Division I women's teams perceived greater advantage and more opportunity to occupy head coaching positions than their male counterparts, but did not pursue head coaching jobs as frequently. Intention to head coach was measured using the same two items from the Cunningham et al. (2003) study with a very high Cronbach alpha ($\alpha = .91$) reliability estimate. Subjects' were asked to rate on a 7-point Likert scale their desire to head coach and the likeliness that they would pursue head coaching. The two items were then averaged to calculate a head coaching intention score. The mean score of the male subjects was 5.929 while the mean score of the female subjects was 4.905. The difference was significant with a $p < .0001$. Of the male subjects 49.9% recorded a 7 on the 7 point Likert scale when asked to rate their desire to head coach and 65.9% recorded a 7 when asked how likely it was that they would pursue head coaching in their career. In contrast, 28.4% of female subjects recorded 7's on the first question and 34.5% recorded 7's on the second. Identification and examination of the reasons female assistant coaches of women's teams have lower intention to head coach is essential if the decline of female head coaches is to slow and reverse as they represent the most viable pool of head coaching candidates (Sagas et al., 2000).

Self-efficacy

Self-efficacy defined by Bandura (1986) is “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (p. 391). Coaching self-efficacy for the purposes of this study was defined as the assistant coach’s judgment of their capabilities to organize and execute courses of action required to be a head volleyball coach. According to Bandura, feelings of efficacy are strong predictors of “people’s choice of activities, how much effort they will expend, and how long they will sustain this effort in dealing with stressful situations” (Bandura, 1977, p. 194). The results supported the Cunningham et al. (2003) finding that female assistant coaches had significantly lower coaching self-efficacy than their male counterparts. An independent samples t-test concluded that the mean coaching self-efficacy score for the male subjects (6.108) was significantly higher ($p < .0001$) than the female subjects (5.680). It could be relevant to consider that the female subjects in this study were an average of 6.24 years younger than the male subjects with 6 years fewer years of coaching experience (See Tables 2 & 4). It could be that the level of coaching self-efficacy does not have as much to do with gender as it does with experience. When the sample was limited to only those coaches with more than 10 years of coaching experience, there was not a significant difference in the level of coaching self-efficacy based on gender. The same was true when the sample was limited to those with 10 years or less of coaching experience.

Explaining Head Coaching Intentions

Sagas et al. (2000) suggest that assistant coaches perceive motivators to realizing head coaching positions through the experiences they personally endured. This study

attempted to expand the research of Sagas et al. (2000) and Cunningham et al. (2003) findings that self-efficacy significantly explained variance in head coaching intentions by identifying additional experiential variables that explained intentions as well. Multiple linear regression analysis using a stepwise method was run in SPSS 17.0 for Mac with the complete sample to determine if there was a significant model to explain the variance in head coaching intentions. The final model produced explained 12.9% of the variance in head coaching intentions and included the explanatory variables of Coaching Self-Efficacy and Level of Playing Experience. This is very close to the amount of variance explained in the Cunningham et al. (2003) findings where self-efficacy was the only significant explanatory variable. When self-efficacy was the only variable included in the model it accounted for 7.4% of the variance, which is 6% less than the Cunningham et al. (2003) finding suggesting that coaching self-efficacy may not play as large of a role in the volleyball population in explaining head coaching intention as it did in the Cunningham et al. sample that included a variety of Division I women's sports coaches.

It could be surprising to some that there was a significant negative relationship between the level of head coaching intentions and the level of volleyball played (See Table 6). This could be explained by the fact that the male subjects had a significantly lower level of playing experience than the female subjects while having significantly higher head coaching intentions. This is consistent with the fact that females have 11 times the opportunity to participate in NCAA DI volleyball than males. This negative relationship was also significant in the female-only model possibly suggesting that athletes who play at a higher level have less desire to head coach or potentially to coach at all. It is important to note that the amount of variance that is not explained (87.1%) by

this study or other research on this topic is very large and more research needs to be done to determine what variable(s) explain what motivates assistant coaches to pursue head coaching.

Explanatory Variables by Gender

The final research question asked if the variables that were significant in explaining head coaching intention were different based on gender. If retention or recruiting programs are to be targeted to female assistant coaches it will be important to know if different factors go into the desires or motivations to pursue head coaching than for males. Since athletics as suggested by Knoppers (1992) is a gendered (i.e., male) activity and the majority of administrators at all levels are male, these results could provide valuable information for strategies to develop female coaches that are different than those to develop male coaches. The nine potential explanatory variables were entered into separate MLR analyses for the male subjects and the female subjects.

Male Subjects

The results of the MLR analysis only using the male subjects did not produce a significant model ($p = .141$). Due to the fact that the mean intention to head coach for the males was less than 1 point lower (6.108) than the highest rating on the 7 pt Likert scale it is clear that male assistant coaches intentions to head coach are already high. Due to the fact that there is already a majority of male head coaches in women's sports, researching additional factors that explain this intention may not provide any practical implication.

Female Subjects

The resulting model of the MLR analysis run with the female subjects was significant ($p < .0001$) explaining 16.6% of the variance in head coaching intentions and included the explanatory variables: Coaching Self-Efficacy, Level of Volleyball Played, Mentoring Experienced (See Table 7). This finding is consistent with the Cunningham et al. (2003) study that self-efficacy is significant in explaining head coaching intentions in female assistant coaches. An interesting finding was that the level of volleyball played had a negative relationship with head coaching intentions in the female sample. It would be interesting to examine other sports to see if this finding would be consistent. Does the higher-level athlete not have as much desire to coach because she has played longer or continued to play professionally following college? Is there a burnout factor?

The most impactful finding from the female-only model is that the Level of Mentoring Experienced was significant in explaining head coaching intentions. The female coaching subjects in the Kilty (2006) study frequently discussed a lack of female mentors as a barrier for other women to get into the profession (Kilty, 2006). This variable was not significant in the overall model or the male-only analysis and there was no significant difference in the level of mentoring reported by male subjects and female subjects (See Table 4). This opens up the possibility that female assistant coaches may benefit from mentoring where male assistants may not. And may also confirm that mentoring programs are useful in reversing the decline of female coaches of women's teams. More research should be done based on this finding to more closely examine the types of mentoring that are significant in raising the level of head coaching intentions by female assistant coaches and also to measure female coaches' access to mentoring.

Limitations

There are several potential limitations when interpreting the results of this study. The subjects were limited to NCAA DI assistant volleyball coaches and the results therefore cannot be extended to other NCAA divisions or other sports. More research could be done in the other divisions within the volleyball population, as there is often movement in the coaching ranks between divisions and the gender makeup in the other divisions could be different.

The second limitation of this study is the 39% response rate. Although it provided a large enough sample to run the statistical analysis and acceptably reflected the gender makeup of the population, there is the possibility of a non-response bias. Although this response rate and sample size is comparable with other research on this topic (Sagas et al., 2000; Cunningham et al., 2003), there is still the possibility that the non-respondents or those who did not fully complete the survey could have answered differently.

A third limitation could be the instrumentation. Although this study utilized previously developed instruments with acceptable reliability estimates, there is a chance that the instruments do not offer the subjects enough range or don't hone in specifically on the factors that actually create and explain variance in the responses. Specifically the second item measuring head coaching intentions asks how likely it is that the subject will pursue head coaching but gives no timetable (i.e., "I plan to pursue a head coaching position in the next 5 years"). The MFQ-9, while providing an efficient way to measure the mentor functions experienced by the subject, was measured on a 5 point Likert scale, which may not have provided the variance in responses necessary to explain head

coaching intentions. Future research could also be pursued to obtain more specifics about mentor relationships and the mentee's perception of the value to their career.

Finally, this study only examined a limited number of variables and their relationship to head coaching intentions. These variables explained a very limited (12.9%) amount of the variance in head coaching intentions and more research will need to be done to further examine what variables play a role specifically in female assistant coaches desire to become head coaches.

Implications

Although self-efficacy remained the variable that explained most of the variance in head coaching intention for the overall and female-only models, in both cases it explained less than past research suggesting the volleyball population might be different than other sports. This could potentially stem from the fact that such a high percentage (81%) of female assistant coaches have played NCAA Division I volleyball or higher, which is the level that they are currently coaching. It is also relevant that for the subjects who had more than 10 years of coaching experience, there was not a significant difference in the level of coaching self-efficacy based on gender. This makes the factors of age and coaching experience relevant ones in the examination of head coaching intentions between the genders. If female assistant coaches are not remaining in the profession long enough to desire to reach the highest level of the profession or view coaching as an unattainable career then there will continue to be fewer viable female candidates for head coaching positions. The significant difference in age and years of coaching experience emphasizes the need for future research on why female coaches are leaving the profession at the assistant coaching level. Some may be being hired as head

coaches at a younger age than their male counterparts. Another possibility is that they are able to secure assistant coaches positions in NCAA Division I due to their playing experience and the perception of the need for a female on the staff of a women's team at a younger age, but are unsure of their actual desire to pursue coaching as a career. Sagas et al., (2000) suggest that although female assistant coaches perceive a greater advantage and more opportunity to occupy head coaching positions than males, they seem unwilling to remain in the profession or take the necessary precursory steps needed to secure head coaching jobs (Sagas et al., 2000). Cunningham and Sagas (2007) explored the impact of treatment discrimination on career satisfaction and turnover intentions finding that there was no difference between men and women in experiencing treatment discrimination, but that men were more adversely affected by treatment discrimination. This finding suggests that women's career satisfaction does not mitigate the importance of such work experiences for women (Cunningham & Sagas, 2007).

This study did confirm that the level of head coaching intentions of male assistant coaches was significantly higher than the female assistant coaches. Even when examining the coaches with similar number of years experience (over 10 years), the male assistant coaches had significantly more intention to head coach. As long as this continues to be true, the decline of female head coaches will continue. It will be important to further examine the explanatory variables that were significant in the female model (Self-efficacy, Level Played and Mentor Experienced) to maintain diversity in athletic departments and specifically with the leaders of the highest-level volleyball programs. It is an encouraging finding that level of mentoring was significant in explaining head coaching intention as many have recommended mentoring programs as a way to retain

female coaches (Young 1990; Pastore 1991; Kilty, 2006). Although some research has been done on mentoring athletic administrators (Young 1990; Weaver & Chelladurai, 2002) more research is needed in the examination of assistant coaches mentor relationships and which ones are successful at developing female head coaches.

Future Research

Future research should continue to examine why the female assistant coaches choose to leave the profession sooner than their male counterparts and what factors play a role in this decision. Based on the results of this study the athletic and coaching experience and psychological factors measured explained very little (12.9%) of the subjects' intention to pursue head coaching. Perhaps the answer lies in the assistant coaches perceptions of the amount of work required to obtain a head coaching position and their motivation to spend the time necessary in an apprentice role with little control of their time during a time in most people's lives when they are getting married and starting a family. Although this study did not produce any significant findings regarding the subjects' current household size or number of children, maybe the measurement should have been "how many children do you plan to have" or "what is your estimated household size in 10 years". This may have provided a more accurate picture of why female assistant coaches are not remaining in the profession through their early thirties.

The next step in expanding this research would be to examine the female head coaches who have remained in the profession and what factors have contributed to their retention. Bruening and Dixon (2008) have begun to research this topic with their qualitative study of gendered experiences of NCAA Division I head coaching mothers. This study found that the amount of flexibility and support from their athletic director

was the most critical factor in determining the direction of the coaching mother's career trajectory along with the support of their spouse/partner (Bruening & Dixon, 2008). This course of research should be continued and expanded to examine not just the coaches themselves but also the athletic departments they are in to identify organizational factors that create a work environment where female coaches are retained.

Recommendations

According to this study, female assistant volleyball coaches of Division I programs were an average of six years younger than their male counterparts with significantly less intention to pursue head-coaching. If athletic departments value diversity in their workforce and the benefits female head coaches can bring to their student-athletes, they should focus on the retention of their female assistant coaches and work to provide an environment where starting a family doesn't preclude them from being good at and gaining satisfaction from their job. Athletic departments can do this by providing continuing education to strengthen coaching self-efficacy including the implementation of formal mentoring relationships or programs. Past research has frequently suggested mentoring as a potential solution to the decrease of female head coaches (Cunningham et al., 2007; Kilty 2006; Lough, 2001; Pastore, 2003; Sagas et al., 2006; Weaver & Chelladurai, 1999) and this study confirms that female assistant coaches' head coaching intentions do have a significant relationship with the level of mentoring they have experienced. Athletic departments could also improve retention of female coaches by considering more creative solutions such as sabbaticals for head coaches for family or professional reasons. University of San Diego head volleyball coach Jen Pietrie took a sabbatical from her position after the birth of her second child

and her assistant coach took over the program for 9 months including the competitive season. Arrangements like this could succeed in reducing burnout and provide opportunities to pursue continuing education while providing an assistant coach the experience in taking the lead. More research should be done on the effectiveness of such solutions.

It is realistic to think female coaches will not receive this support from their athletic departments due to the transitive nature of coaching and the fact that both financial and intellectual resources are not often allocated to non-revenue generating sports. This may leave it up to the coaches themselves and coaching associations like the American Volleyball Coaches Association (AVCA) to organize mentoring relationships and offer opportunities to further develop female coaches that can lead collegiate volleyball programs.

APPENDICIES

Appendix A: Survey

Gender: Male/Female

Age: _____

How many children do you have under the age of 25? _____

What is your household size (please include all members of your household that are financially dependent on you)? _____

Highest level of education completed (please select one)

- High school diploma/GED
- Associates Degree/Junior College
- Bachelor's Degree
- Master's Degree
- PhD/Doctoral Degree

Total # of Years Playing Volleyball: _____

Highest level of volleyball played

- None, did not play volleyball
- High School
- Junior College
- NCAA Division III College
- NCAA Division II College/NAIA
- NCAA Division I College
- National Team /Professional

Total # of years coaching volleyball: _____

Current total annual income from assistant coaching (e.g. salary, camps, speaking engagements, etc.)

- Less than \$25,000
- \$25,000 – \$29,999
- \$30,000 - \$34,999
- \$35,000 - \$39,999
- \$40,000 - \$44,999
- \$45,000 – \$49,999
- \$50,000 – \$54,999
- \$55,000 – \$59,999
- \$60,000 – \$64,999
- \$65,000 - \$69,999
- \$70,000 - \$74,999
- \$75,000 - \$79,999
- \$80,000 +

How many professional development events (e.g. conferences, seminars, classes, CAP clinics, etc) have you attended in your career as a coach?

- 0
- 1-5
- 6-10
- 11 – 15

- 15 – 20
- 20 – 25
- 25 – 30
- 30 +

The following questions focus on mentoring. For the purposes of this study mentoring is defined “as a process in which a more experienced person serves as a role model, provides guidance and support to a developing novice, and sponsors that novice in his/her career progress”.

Please rate to what extent a mentor has provided you with the following functions.

“1” indicating “Not at all” and “5” indicating “To a very great extent”.

1. A mentor has taken a personal interest in my career	1	2	3	4	5
2. A mentor has helped me coordinate professional goals	1	2	3	4	5
3. A mentor has devoted special time and consideration to my career	1	2	3	4	5
4. I have shared personal problems with a mentor	1	2	3	4	5
5. I have exchanged confidences with a mentor	1	2	3	4	5
6. I have considered a mentor to be a friend	1	2	3	4	5
7. I try to model my behavior after a mentor	1	2	3	4	5
8. I have admired a mentor’s ability to motivate others	1	2	3	4	5

9. I have respected a mentor's ability to teach others	1 2 3 4 5

The following questions focus on activities intercollegiate head coaches would perform.

Please rate the level of confidence you have that you could complete these tasks.

“1” indicating “No confidence” and “7” indicating “Complete confidence”

1. Resist the interference by parents, alumni, and other groups.	1 2 3 4 5 6 7
2. Accurately assess the abilities of your players.	1 2 3 4 5 6 7
3. Change coaching strategies if they did not work.	1 2 3 4 5 6 7
4. Select the players best suited for your strategies.	1 2 3 4 5 6 7
5. Identify individuals and groups who can help your program or team.	1 2 3 4 5 6 7
6. Be self-assured in dealing with problems.	1 2 3 4 5 6 7
7. Modify your strategies according to the strengths and	1 2 3 4 5 6 7

7. Modify your strategies according to the strengths and weaknesses of your opponent.	1	2	3	4	5	6	7
8. Determine your coaching strengths.	1	2	3	4	5	6	7
9. Make intelligent coaching choices.	1	2	3	4	5	6	7

Please respond to the following items concerned your interest in becoming a head coach at the intercollegiate level.

1. How much desire do you have to become a head coach?	1	2	3	4	5	6	7
No desire				Much desire			
2. How likely is it that you will search and apply for a head coaching position during your career?	1	2	3	4	5	6	7
Not likely				Very likely			

Appendix B: Invitation E-mail

Hi <<Subject Name>>,

My name is Erin Lindsey and I am a Sport Administration graduate student at the University of North Carolina at Chapel Hill and a former assistant volleyball coach at the UNC. I am currently working on my master's thesis project before heading back into the coaching world. In order to gain a better understanding of the proportion of male and female head coaches in women's volleyball, I am examining the head coaching intentions of NCAA Division I women's volleyball assistant coaches.

I realize that this is a busy time of year, but if you could spare 5-10 minutes of your time to complete this online questionnaire about your experience in volleyball and as an assistant coach at the Division I level it would be greatly appreciated. Your responses will remain anonymous and confidential at all times. Should this study be published or presented only aggregate data will be reported.

Click here to access the survey <http://www.surveymonkey.com/s/957PHZH>

By clicking the survey link you are consenting to take part in the research study. You may skip any question, or part of any question, that you do not wish to answer, for any reason. If you have any questions or concerns during the study, please feel free to contact me at any time by phone (919-434-3123) or email (elindsey@uncaa.unc.edu). Furthermore, you may also contact my advisor, Barbara Osborne (sportlaw@unc.edu), or the UNC Institutional Review Board (IRB) (919-966-3113; subjects@unc.edu) if you have questions or concerns about your rights as research subjects.

In order to make this worth your time, I will be happy to provide with a summary of my results at the conclusion of the research, however, to protect your confidentiality and anonymity, you will not be able to request this while completing the online survey. If you would like a copy of the results please e-mail me at elindsey@unca.unc.edu. Best of luck with the end of your season and your professional endeavors! Thanks so much for your time and assistance.

Click here to access the survey <http://www.surveymonkey.com/s/957PHZH>

Sincerely,

Erin Lindsey

University of North Carolina at Chapel Hill

Master of Arts Candidate, Sport Administration

(919) 434-3123

REFERENCES

- Acosta, R., & Carpenter, L.J. (1985). *Status of women in athletics: Changes and causes*. Journal of Physical Education, Recreation, and Dance, 56(8), 33-37.
- Acosta, R., & Carpenter, L.J. (1988). *Perceived causes of the declining representation of women leaders in intercollegiate sports – 1988 update*. Unpublished manuscript, Brooklyn College, New York.
- Acosta, R., & Carpenter, L. J. (2010). *Women in intercollegiate sport. A longitudinal study - thirty three year update - 1977-2010*. Unpublished manuscript, Brooklyn College, New York. Retrieved from <http://www.acostacarpenter.org/>.
- Aicher, T.J., & Sagas, M. (2009) An Examination of Homologous Reproduction and the Effects of Sexism. *Journal for the Study of Sports and Athletes in Education*, 3, 375-386.
- American Volleyball Coaches Association (2008). *Division I Salary Survey*. Unpublished report. Lexington, Kentucky.
- Avery, D. R., Tonidandel, S., & Phillips, M. (2008). Similarity on Sports Sidelines: How Mentor-Protege Sex Similarity Affects Mentoring. *Sex Roles*, 58, 72-80.
- Bandura, A. (1977) Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review*, 84 (2), 191-215.
- Bandura, A. (1986) Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice Hall.
- Bloom, G. A., Durand-Bush, N., Schinke, R., & Salmela, J. (1998). The Importance of Mentoring in the Development of Coaches and Athletes. *International Journal of Sports Psychology*, 29, 267-281.
- Bruening, J. E., & Dixon, M. A. (2008). Situating Work-Family Negotiations Within a Life Course Perspective: Insights on the Gendered Experiences of NCAA Division I Head Coaching Mothers. *Sex Roles*, 58, 10-23.
- Cunningham, G.B. (2008). Creating and Sustaining Gender Diversity in Sport Organizations. *Sex Roles*, 58, 136 – 145.
- Cunningham, G., Doherty, A. J., & Gregg, M. J. (2007). Using Social Cognitive Career Theory to Understand Head Coaching Intentions among Assistant Coaches of Women's Teams. *Sex Roles*, 56, 365-372.
- Cunningham, G. B., & Sagas, M. (2002). The differential effects of human capital for male and female Division I basketball coaches. *Research Quarterly for Exercise and Sport*, 73, 489–495.

- Cunningham, G. B., & Sagas, M. (2003). Occupational Turnover Intent Among Assistant Coaches of Women's Teams: The Role of Organizational Work Experiences. *Sex Roles* , 49, 185-190.
- Cunningham, G.B., & Sagas, M. (2007). Examining Potential Difference Between Men and Women in the Impact of Treatment Discrimination. *Journal of Applied Social Psychology*, 37(12), 3010 – 3024.
- Cunningham, G., Sagas, M., & Ashley, F. B. (2003). Coaching Self-efficacy, Desire to Become a Head Coach, and Occupational Turnover Intent: Gender Differences Between NCAA Assistant Coaches of Women's Teams. *International Journal of Sport Psychology* , 34, 125-137.
- Cunningham, G.B., & Singer, J.N. (2010). “You’ll Face Discrimination Wherever You Go”: Student Athletes’ Intentions to Enter the Coaching Profession. *Journal of Applied Social Psychology*, 40(7), 1708 – 1727.
- Dixon, M., & Sagas, M. (2007). The Relationship Between Organizational Support, Work-Family Conflict, and the Job-Life Satisfaction of University Coaches. *Research Quarterly for Exercise and Sport* , 78 (3), 236-247.
- Everhart, C. B., & Chelladurai, P. (1998). Gender Differences in Preferences for Coaching as an Occupation: The Role of Self-Efficacy, Valence, and Perceived Barriers. *Research Quarterly for Exercise and Sport* , 69 (2), 188-200.
- Fagenson, E. (1990). At the Heart of Women in Management Research: Theoretical and Methodological Approaches and Their Biases. *Journal of Business Ethics* , 9, 267-274.
- Fagenson, E. (1992). Mentoring-Who Needs It? A Comparison of Proteges’ and Nonproteges’ Needs for Power, Achievement, Affiliation, and Autonomy. *Journal of Vocational Behavior* , 48-60.
- Habif, S., VanRaalte, J.L., & Cornelius A. (2001). Athletes’ Attitudes Toward and Preferences for Male and Female Coaches. *Women in Sport and Physical Activity Journal*, 10(1), 73-88.
- Hart, B. A., Hasbrook, C. A., & Mathes, S. A. (1986). An examination of the reduction in the number of female interscholastic coaches. *Research Quarterly for Exercise and Sport* , 57, 68-77.
- Hasbrook, C. A., Hart, B.A., Mathes, S. A., & True, S. (1990). Sex bias and the validity of believed differences between male and female interscholastic coaches. *Research Quarterly for Exercise and Sport*, 61, 259-267.
- Inglis, S. E. (1988). The Representation of Women in University Athletic Programs. *Journal of Sport Management* , 2, 14-25.

- Inglis, S., Danylchuk, K. E., & Pastore, D. L. (2000). Multiple Realities of Women's Work Experiences in Coaching and Athletic Management. *Women in Sport & Physical Activity Journal* , 9 (2).
- Inglis, S., Danylchuk, K. E., & Pastore, D. (1996). Understanding Retention Factors in Coaching and Athletic Management Positions. *Journal of Sport Management* , 10, 237-249.
- Kampoff, C., & Gill, D. (2008). Collegiate Athletes' Perceptions of the Coaching Profession. *International Journal of Sports Science & Coaching*, 3(1), 55-72.
- Kanter, R.M. (1977). *Men and women of the corporation*. New York: Basic Books.
- Kilty, K. (2006). Women in Coaching. *The Sport Psychologist* , 20, 222-234.
- Knoppers, A. (1987). Gender and the Coaching Profession. *Quest* , 39, 9-22.
- Knoppers, A. (1992). Explaining Male Dominance and Sex Segregation in Coaching: Three Approaches. *Quest*, 44, 201-227.
- Knoppers, A., Meyer, B.B., Ewing, M., & Forrest, L. (1990) Dimensions of Power: A Question of Sport or Gender? *Sociology of Sport Journal*, 7, 369-377.
- Knoppers, A., Meyer, B., Ewing, M., & Forrest, L. (1991). Opportunity and Work Behavior in College Coaching. *Journal of Sport and Social Issues* , 15 (1), 1-20.
- Kram, K. E. (1985). *Mentoring at Work*, Scott Foresman, Glenview, IL.
- LeDrew, J.E., & Zimmerman, C. (1994). Moving towards an acceptance of females in coaching. *Physical Educator*, 51(1), 6-13.
- Lenskyj, H. (1994). Sexuality and femininity in sport contexts: Issues and alternatives. *Journal of Sport and Social Issues*, 18(4), 356-376.
- Lough, N. (2001). Mentoring Connections Between Coaches and Female Athletes. *Journal of Physical Education, Recreation and Dance* , 72 (5), 30-33.
- Lovett, D. J., & Lowry, C. D. (1994). "Good Old Boys" and "Good Old Girls" Clubs: Myth or Reality? *Journal of Sport Management* , 5, 27-35.
- Merriam, S.B. (1998). Case Study research in education: A qualitative approach (2nd ed.). San Francisco: Jossey-Bass Publishers.
- Narcotta, E., Peterson, J., & Johnson, S. (2009). Mentor functions in NCAA women's soccer coaching dyads. *Team Performance Management* , 15 (3/4), 100-116.
- National Collegiate Athletic Association (2010) *2008 – 2009 Ethnicity and Gender Demographics of NCAA Member Institution's Athletics Personnel Report*. Indianapolis, IN: NCAA. Retrieved from <http://www.ncaa.org/wps/wcm/connect/public/ncaa/resources/research/diversity+research>.

- Parkhouse, B.L., & Williams, J.M. (1986) Differential Effects of Sex and Status on Evaluation of Coaching Ability. *Research Quarterly for Exercise and Sport*, 57(1), 53-59.
- Pastore, D.L. (1991). Male and Female Coaches of Women's Athletic Teams: Reasons for Entering and Leaving the Profession. *Journal of Sport Management*, 5, 128-143.
- Pastore, D. L. (2003). A different lens to view mentoring in sport management. *Journal of Sport Management* , 17, 1-12.
- Pellegrini, E.K., & Scandura, T.A. (2005) Construct Equivalence across groups: An unexplored issue in mentoring research. *Educational and Psychological Measurement*, 65(2), 323-335.
- Ragins, B.R., & McFarlin, D.B. (1990) Perceptions of Mentor Roles in Cross-Gender Mentoring Relationships. *Journal of Vocational Behavior*, 37, 321-339.
- Ryan, T. D., & Sagas, M. (2009). Relationships between pay satisfaction, work-family conflict, and coaching turnover intentions. *Team Performance Management* , 15 (3), 128-140.
- Sagas, M., & Cunningham, G. B. (2008). Gender and Sex Diversity in Sport Organization: Introduction to a Special Issue. *Sex Roles* , 58, 3-9.
- Sagas, M., Cunningham, G. B., & Ashley, F. B. (2000). Examining the Women's Coaching Deficit through the Perspective of Assistant Coaches. *International Journal of Sport Management* , 1, 267-282.
- Sagas, M., Cunningham, G. B., & Pastore, D. (2006). Predicting Head Coaching Intentions of Male and Female Assistant Coaches: An Application of the Theory of Planned Behavior. *Sex Roles* , 54, 695-705.
- Sagas, M., Cunningham, G.B., & Teed, K. (2006). An Examination of Homologous Reproduction in the Representation of Assistant Coaches of Women's Teams. *Sex Roles*, 55, 503-510.
- Sage, G.H. (1975) Sport and social order: Contributions to the sociology of sport. *Reading, Mass.: Addison-Wesley Pub.*
- Sage, G.H. (1975) Sport and social order: Contributions to the sociology of sport. *Reading, Mass.: Addison-Wesley Pub.*
- Sartore, M.L., & Cunningham, G.B. (2007) Explaining the Under-Representation of Women in Leadership Positions of Sport Organizations: A Symbolic Interactionist Perspective. *Quest*, 59(2), 244-266
- Sartore, M. L., & Sagas, M. (2007). A Trend Analysis of the Proportion of Women in College Coaching . *International Journal of Sport Management* , 8, 226-244.

- Scandura, T.A. (1992). Mentorship and career mobility: An empirical investigation. *Journal of Organizational Behavior*, 13, 169-174.
- Stangl, J. M., & Kane, M. J. (1991). Structural Variables That Offer Explanatory Power for the Underrepresentation of Women Coaches Since Title IX: The Case of Homologous Reproduction. *Sociology of Sport Journal*, 8, 47-60.
- US Department of Education. (2010, 24-August). *The Equity in Athletics Data Cutting Tool*. From <http://ope.ed.gov/athletics/>
- Weaver, M. A., & Chelladurai, P. (1999). A mentoring model for management in sport and physical education. *Quest*, 51, 24-38.
- Weaver, M. A., & Chelladurai, P. (2002). Mentoring in Intercollegiate Athletic Administration. *Journal of Sport Management*, 16, 96-116.
- Weinberg, R., Reveles, M., & Jackson, A.W. (1984) Attitudes of Male and Female Athletes Toward Male and Female Coaches. *Journal of Sport & Exercise Psychology*, 6(4), 448-453.
- Weiss, M.R., & Stevens, C. (1993) Motivation and Attrition of Female Coaches: An Application of Social Exchange Theory. *The Sport Psychologist*, 7, 244-261.
- Welch, S., & Sigelman, L. (2007). Who's Calling the Shots? Women Coaches in Division I Women's Sports. *Social Science Quarterly*, 88 (5), 1415-1434.
- West, A., Green, E., Brackenridge, C.H., & Woodward, D. (2001). Leading the way: women's experiences as sports coaches. *Women in Management Review*, 16(2), 85-92.
- Whisenant, W. (2008). Sustaining Male Dominance in Interscholastic Athletics: A Case of Homologous Reproduction. . .or Not? *Sex Roles*, 58, 768-775.
- Witz, A. (1990). Patriarchy and professions – the gendered politics of occupational closure. *Sociology*, 24(4), 675-690.
- Young, D. (1990). Mentoring and Networking: Perceptions by Athletic Administrators. *Journal of Sport Management*, 4, 71-79.